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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/770,491  | 01/29/2001  | Janne Kallio         | 59864 00527         | 7373             |
| 32294   | 7590        | 01/08/2007           | EXAMINER            |                  |
| SQUIRE, SANDERS & DEMPSEY L.L.P.<br>14TH FLOOR<br>8000 TOWERS CRESCENT<br>TYSONS CORNER, VA 22182 |             |                      | D AGOSTA, STEPHEN M |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2617                |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE  | MAIL DATE   | DELIVERY MODE        |                     |                  |
| 3 MONTHS  | 01/08/2007  | PAPER                |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/770,491             | KALLIO, JANNE       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Stephen M. D'Agosta    | 2617                |  |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 30 October 2006.

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 31-33,35-43,45-56 and 58-75 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 31-33,35,37,38,41-43,45,47-51,55,56,58,60 and 64-75 is/are rejected.

7) Claim(s) 36,39,40,46,52-54,59 and 61-63 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Response to Arguments***

Applicant's arguments with respect to claim 31-33, 35-43, 45-56 and 58-75 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 31-33, 35, 37-38, 41-43, 45, 47, 48-51, 55-56, 58, 60 and 64-75 rejected**  
under 35 U.S.C. 103(a) as being unpatentable over Ray et al. US 6,424,638 and further in view of Keski-Heikkilaet et al. US 6,882,844 and Bell US2002/0049073.

As per **claims 31, 42, 49 and 55**, Ray teaches an apparatus for a first telecommunication network (Abstract teaches a mobile handing over between two different networks), the apparatus comprising:

a data store to store a cell identity information for a cell of the first telecommunication network (Figure 1, shows an HLR #26 and VLR #16),

wherein the apparatus is configured to allow the cell of the first telecommunication network to be identified as a neighboring cell by a cell of the second telecommunication network (Abstract teaches serving and target MSC's which inherently infers a target BTS/cell which will support the mobile after handoff. The examiner notes that neighbor lists are well known in cellular networks and inherently include a list of BTS's the mobile can handoff to, depending upon their location and signal strength),

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**but is silent on using a cell identity information structure of a second telecommunication network;**

The examiner notes that Ray teaches the need to translate protocols and data between the two networks:

With all of these different types of wireless communications systems available, seamless roaming from one type of system to another has posed significant problems for the industry. For example, if a mobile subscriber is involved in a wireless call, and the call needs to be handed over to another type of system in order to continue the call, conversion and interface devices are needed to perform this task. One device that exists today to perform such handovers between D-AMPS and GSM systems is a Roam-Free Gateway (RFG), formerly known as an Interworking Location Register (ILR). The RFG acts as a gateway that converts the protocols of the signaling and voice communications between the systems to enable the two systems to communicate effectively in order to perform call handovers. (C1, L39-56)

Therefore, in accordance with aspects of the present invention, the currently serving GSM MSC 14a sends an identity message 315, including location information 318, e.g., X, Y coordinates and preferably a coverage area radius, for the GSM base station 25a, to an Internet Gatekeeper 320 via an Internet Gateway 310a for the GSM system 350 (step 415). The GSM Internet Gateway 310a converts the GSM identity message 315 into Internet Protocol (IP) packets 335 containing the identity message 315 and location information 318, and routes the IP packets 335 through an Internet 330 to the Internet Gatekeeper 320 for the area that includes the GSM MSC 14a. This identity message 315 preferably inquires whether there are any other types of wireless systems nearby that the call can be handed over to. Alternatively, the GSM MSC 14a may have knowledge about the existence of another type of system nearby, and the identity message 315 may seek confirmation of the existence of the other type of system from the Internet Gatekeeper 320. (C4, L52 to C5, L5)

Keski-Heikkilaet teaches a permanent Cell ID (see C4, L39-46) which can be viewed as a "common" Cell ID format. Hence, the applicant is uses one network's structure to represent the Cell ID while Keski-Heikkilaet uses a method whereby his "permanent" format can be used in a similar manner, eg. sending the mobile the

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permanent Cell ID. Furthermore, Keski-Heikkilaet teaches generically modifying the Cell ID format/structure which broadly reads on the applicant's broad claims.

Bell teaches handovers for a dual-mode phone comprising a cellular transceiver and a short-range transceiver such as Bluetooth (see figure 1 and Paragraphs 4-5). Hence a handoff would be between the cellular system and short range system (see Paragraph 6 and 16).

It would have been obvious to one skilled in the art at the time of the invention to modify Ray, such using a cell identity information structure of a second telecommunication network and one network being either WLAN, Bluetooth or WCDMA, to provide means for using an "alternate" Cell ID to make the mobile think that a listing in the neighbor list is from the same network they are operating on currently and that they can connect to it in a handoff operation.

**With further regard to claims 42 and 49, the combination of Ray, Keski-Heikkilaet and Bell together teach a method to support a seamless mobility/handoff between the two networks.**

**With further regard to claims 64-75, the combination of Ray, Keski-Heikkilaet and Bell together teach a method to networks comprised of WLAN, Bluetooth and/or WCDMA.**

As per **claims 32 and 47**, Ray teaches claim 31/42, wherein the apparatus is a network element (Figure 1, shows an HLR #26 and VLR #16 which are network components/elements).

As per **claim 33**, Ray teaches 33. (New) The apparatus as claimed in claim 3 1, wherein the data store is a database (Figure 1, shows an HLR #26 and VLR #16 which are databases),

As per **claims 35, 45 and 58**, Ray teaches claim 35/42/55, wherein the second telecommunication network is GSM network (Abstract teaches GSM network(s)).

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As per **claim 37**, Ray teaches claim 31 wherein the apparatus has radio transceivers for transmitting the cell information (the storage unit can be located in the HLR and information is transmitted via the BTS transceiver).

As per **claim 38**, Ray teaches claim 31, wherein the apparatus further comprises a handover algorithm which provides seamless mobility between the first telecommunication network and second telecommunication network (Abstract teaches handover).

As per **claim 41**, Ray teaches claim 32 wherein the apparatus is an access point (the storage unit can be located at the HLR and/or at each BTS proximate a second RF network).

As per **claims 43 and 56**, Ray teaches claim 42/55, further comprising means of measuring of signal level of radio transmitters in the first telecommunication network and the second telecommunication network (C3, L45-46 teaches “collecting measurements” which are signal level measurements).

As per **claim 48**, Ray teaches claim 31 wherein the handover module has been implemented in the mobile unit (the examiner takes Official Notice that MAHO handoffs are well known and are assisted by the mobile).

As per **claim 50**, Ray teaches claim 49, further comprising storing the cell information in a neighbor list of neighboring cells of the second telecommunication network (neighbor lists are inherent to cellular networks and Official Notice is taken).

As per **claim 51**, Ray teaches claim 49, wherein the transmitting is done in a cell of the second network (eg. the proximate network transmits a beacon which is received by a first network and it can be included in the neighbor list).

As per **claim 60**, Ray teaches claim 55, wherein the mobile station has means for transmitting the signal level to at least one of the first telecommunication network and the second telecommunication network (C3, L45-46 teaches both the MS or BTS taking measurements. MAHO handoffs are well known and the mobile takes measurements and send them to the network).

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.....  
***Allowable Subject Matter***

**Claims 36, 39-40, 46, 52-54, 59, 61-63** objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

STEVE M. D'AGOSTA  
PRIMARY EXAMINER

1-3-07